

REMARKS

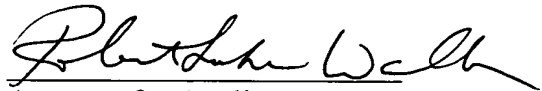
The application has been amended to include missing serial numbers of co-pending applications.

The application has been amended to correct a typographical error.

Reference numeral 214 (shown in red) has been added to Figure 30 of which a copy is attached awaiting approval from the Examiner.

Attached hereto is a marked up version of the changes made to the specification by the current amendment. The attached page(s) is captioned "Version with Markings to Show Changes Made".

Respectfully submitted,



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Attachment: Version with Markings to Show Changes Made
Red-lined drawing of Figure 30

"Version with Markings to Show Changes Made"

IN THE SPECIFICATION

CROSS REFERENCE TO RELATED APPLICATIONS

The paragraph beginning on page 1, line 6, has been amended as set forth below:

Reference is made to commonly assigned co-pending U.S. Patent applications Serial No. [_____] [Attorney Docket No. 80541RLW]] 09/748,620 filed 22 December 2000, entitled: HYBRID CAMERA FILL-FLASH, and filed in the names of Hirohiko Ina and Hisanori Hoshikawa; Serial No. [_____] [Attorney Docket No. 80980RLW]] 09/747,664 filed 22 December 2000, entitled: COLOR CORRECTING FLASH APPARATUS, CAMERA, AND METHOD, and filed in the name of David L. Funston; Serial No. [_____] [Attorney Docket No. 81268RLW]] 09/748,668 filed 22 December 2000, entitled: CAMERA HAVING VERIFICATION DISPLAY AND WHITE-COMPENSATOR AND IMAGING METHOD, and filed in the name of Kenneth A. Parulski; Serial No. [_____] [Attorney Docket No. 82036RLW]] 09/748,100 filed 22 December 2000, entitled: CAMERA HAVING USER INTERFACE WITH VERIFICATION DISPLAY AND COLOR CAST INDICATOR, and filed in the names of David L. Funston, Kenneth A. Parulski, and Robert Luke Walker; Serial No. [_____] [Attorney Docket No. 82037RLW]] 09/748,667 filed 22 December 2000, entitled: CAMERA HAVING VERIFICATION DISPLAY WITH REVERSE WHITE BALANCED VIEWER ADAPTATION COMPENSATION AND METHOD, and filed in the names of Kenneth A. Parulski and David L. Funston; Serial No. [_____] [Attorney Docket No. 82038RLW]] 09/748,664 filed 22 December 2000, entitled: CAMERA HAVING USER INTERFACE AMBIENT SENSOR VIEWER ADAPTATION COMPENSATION AND METHOD, and filed in the name of Kenneth A. Parulski; Serial No. [_____] [Attorney Docket No. 82069RLW]] 09/747,557 filed 22 December 2000, entitled: CAMERA THAT DISPLAYS PREDOMINANT COLOR OF MULTI-COLOR SCENE AND/OR MULTI-COLOR CAPTURED IMAGE OF SCENE, and filed in the name of Roger A. Fields, and Serial No. 08/970,327 filed 14 November 1997, and filed in the names of James R. Niederbaumer and Michael Eugene Miller.

The paragraph beginning on page 18, line 10 has been amended as set forth below:

In currently preferred embodiments, the film shutter 118 is mechanical or electromechanical and the imager shutter 120 is mechanical or electronic. The imager shutter 120 is illustrated by dashed lines to indicate both the position of a mechanical imager shutter 120 and the function of an electronic shutter. When using a CCD, electronic shuttering of the imager 84 can be provided by shifting the accumulated charge under a light shielded provides at a non-photosensitive region. This may be a full frame as in a frame transfer device CCD or a horizontal line in an interline transfer device CCD. Suitable devices and procedures are well known to those of skill in the art. When using a CID, the charge on each pixel is injected into a substrate at the beginning of the exposure. At the end of the exposure, the charge in each pixel is read. The difficulty encountered here is that the first pixel read has less exposure time than the last pixel read. The amount of difference is the time required to read the entire array. This may or may not be significant depending upon the total exposure time and the maximum time needed to read the entire array. CMOS imagers are commonly shuttered by a method called a rolling shutter. CMOS imagers using this method are not preferred, since this shutters each individual line to a common shutter time, but the exposure time for each line begins sequentially. This means that even with a short exposure time, moving objects will be distorted. Given horizontal motion, vertical features will image diagonally due to the temporal differences in the line-by-line exposure. Another method for shuttering CMOS imagers is described in [U.S. Patent No. 5,966,297] U.S. Patent No. 5,986,297. In this method, called single frame capture mode, all pixels are allowed to integrate charge during exposure time. At the end of the exposure time, all pixels are simultaneously transferred to the floating diffusion of the device. At this point sequential read out by lines is possible.

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